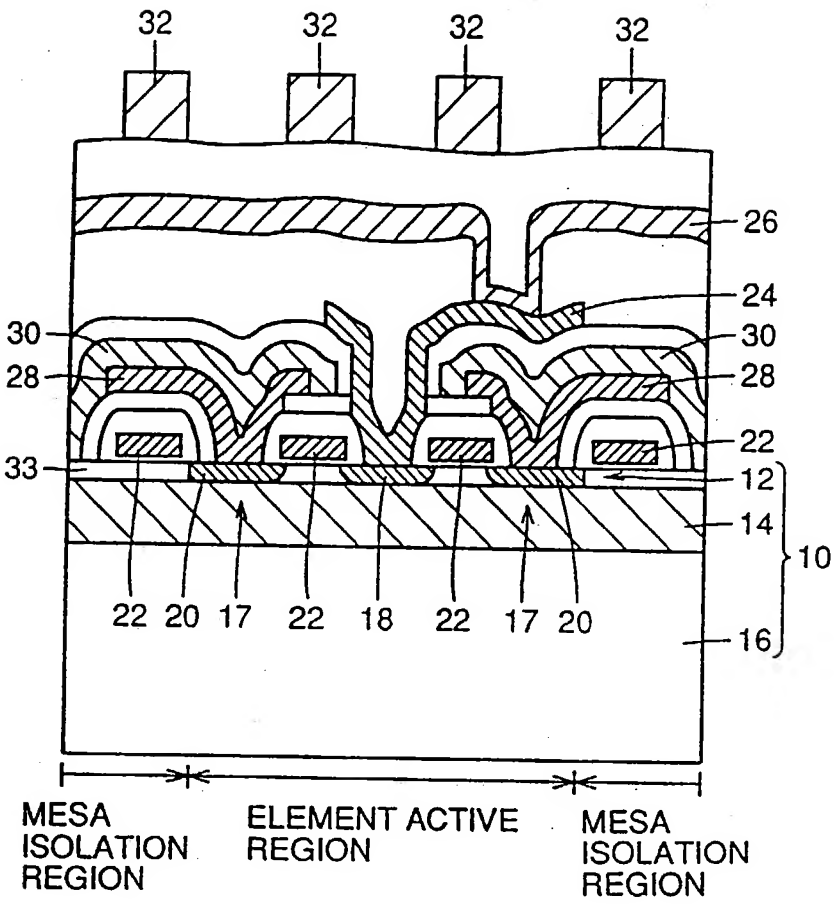
FIG.1


32
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24
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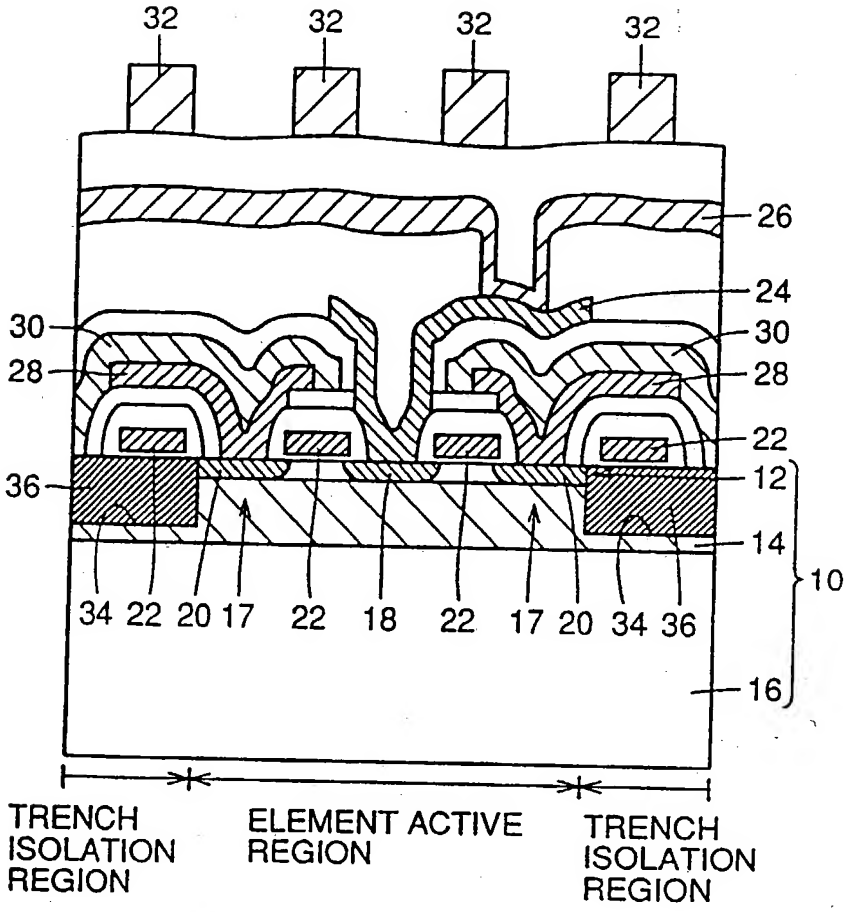
12
14
10
22 20 17 22 18 22 17 20
16
MESA ISOLATION REGION
ELEMENT ACTIVE REGION
MESA ISOLATION REGION

FIG.2


32
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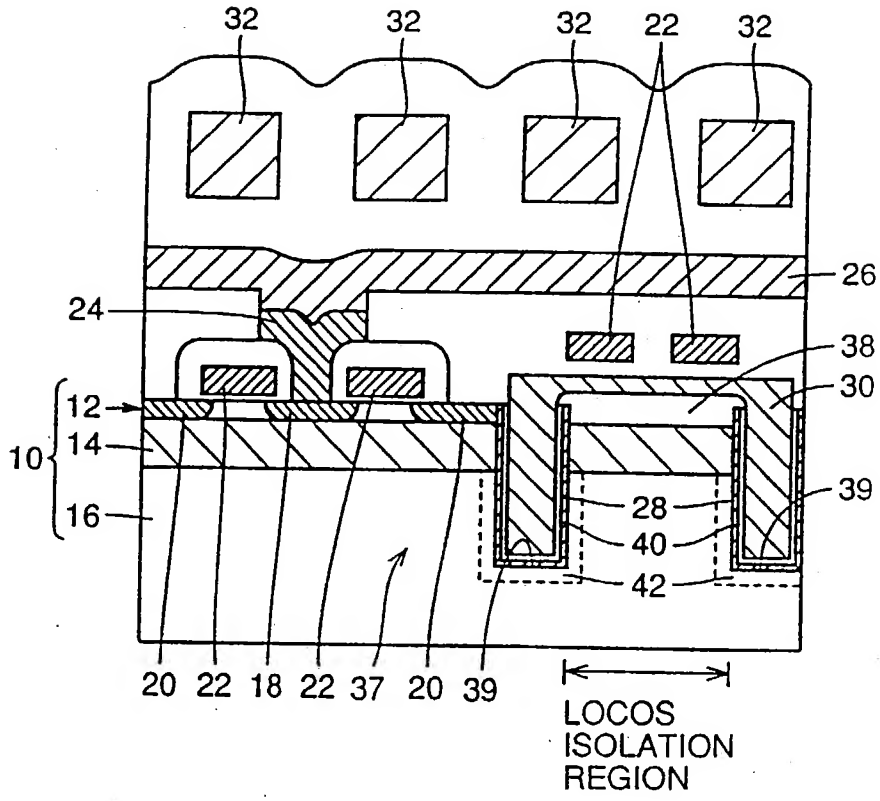
34 22 20 17 22 18 22 17 20 34 36
16
TRENCH ISOLATION REGION
ELEMENT ACTIVE REGION
TRENCH ISOLATION REGION

FIG.3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28
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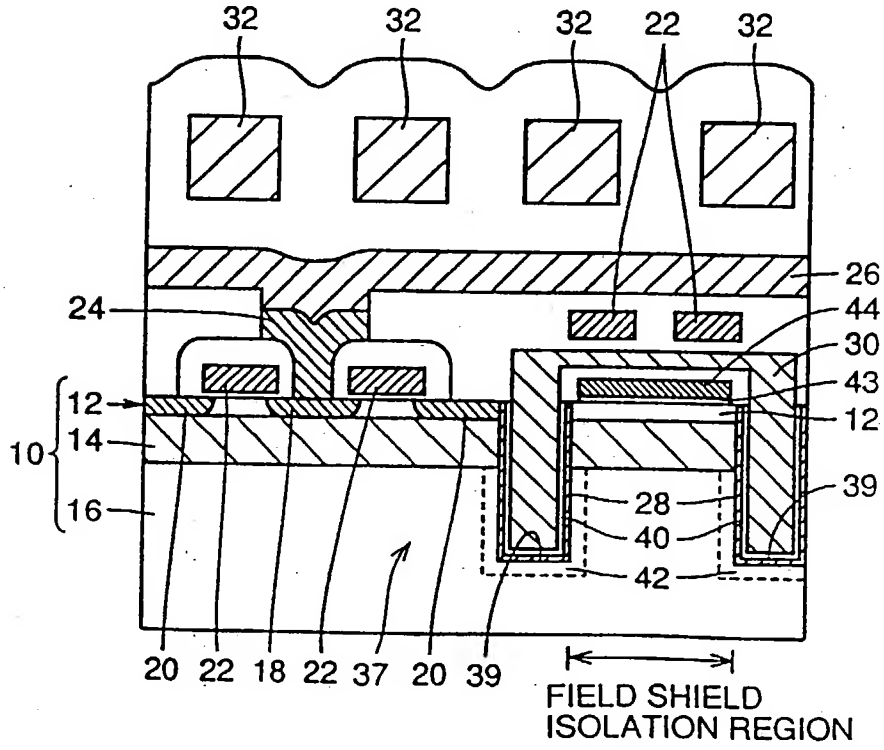
42
20
22
18
22
37
20
39
LOCOS
ISOLATION
REGION

FIG.4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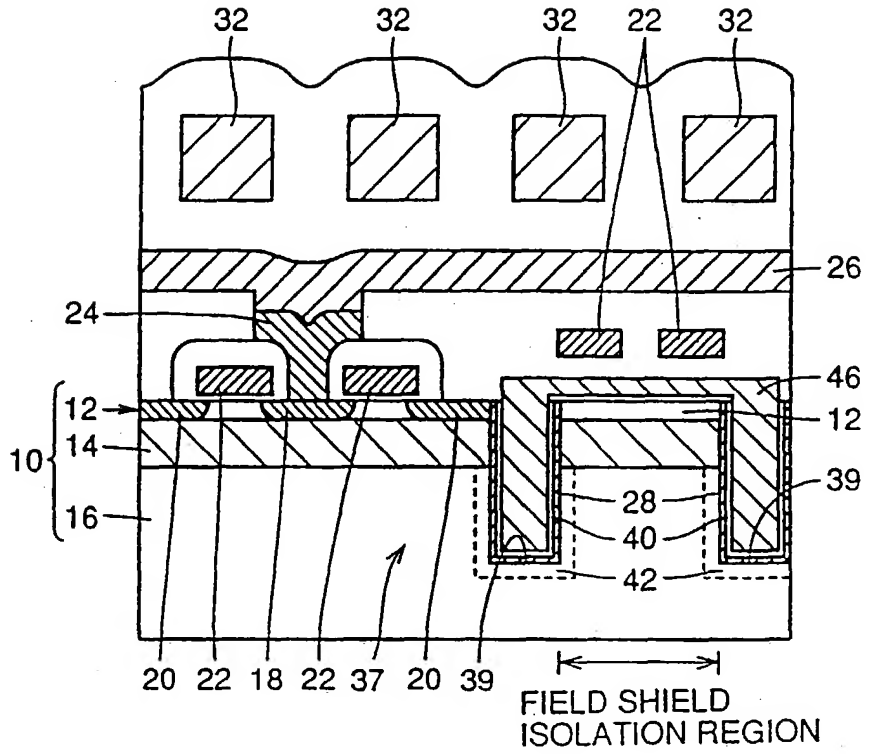
22
18
22
37
20
39
FIELD SHIELD
ISOLATION REGION

FIG.5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22
32
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24
46
12
12
14
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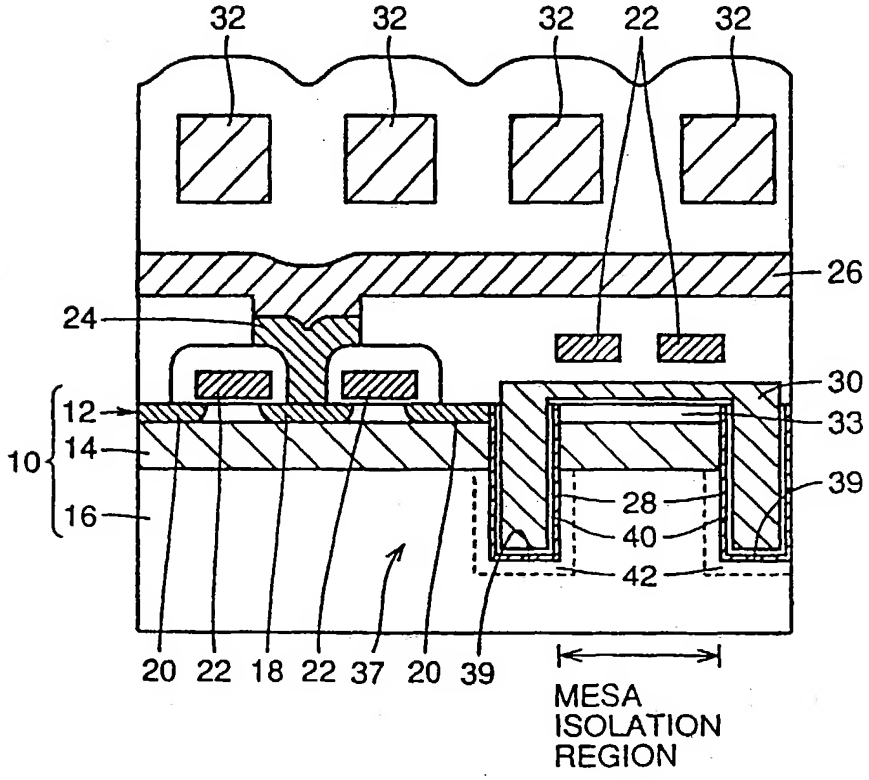
39
16
28
40
42
20
22
18
22
37
20
39
FIELD SHIELD
ISOLATION REGION

FIG.6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42
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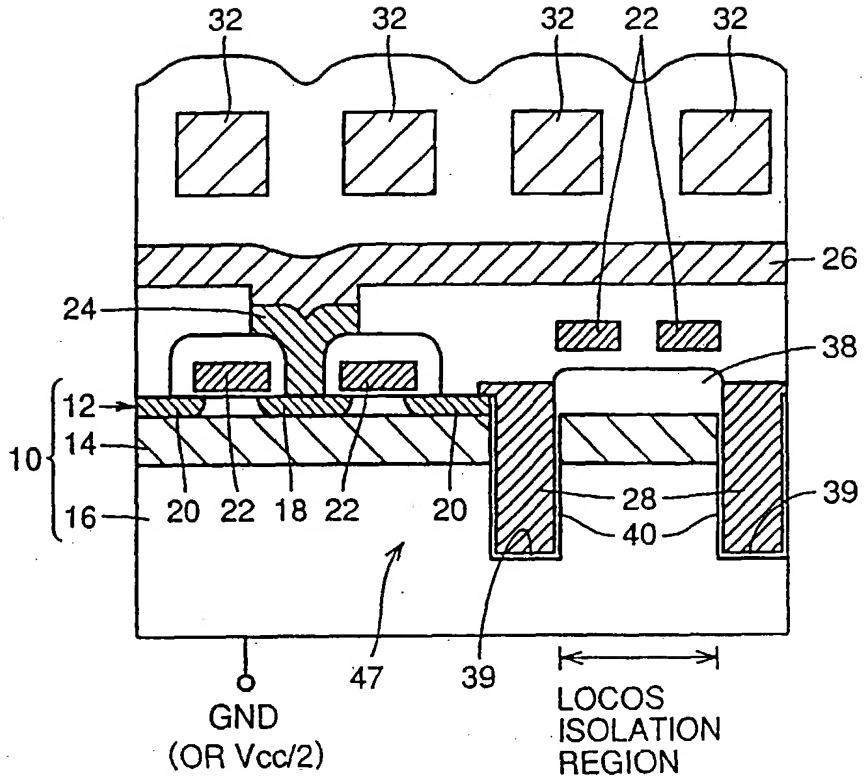
22
37
20
39
MESA
ISOLATION
REGION

FIG.7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32
26
24
38
12
14
10
16
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18
22
20
28
39
40
47
39
GND
(OR Vcc/2)
LOCOS
ISOLATION
REGION

FIG.8

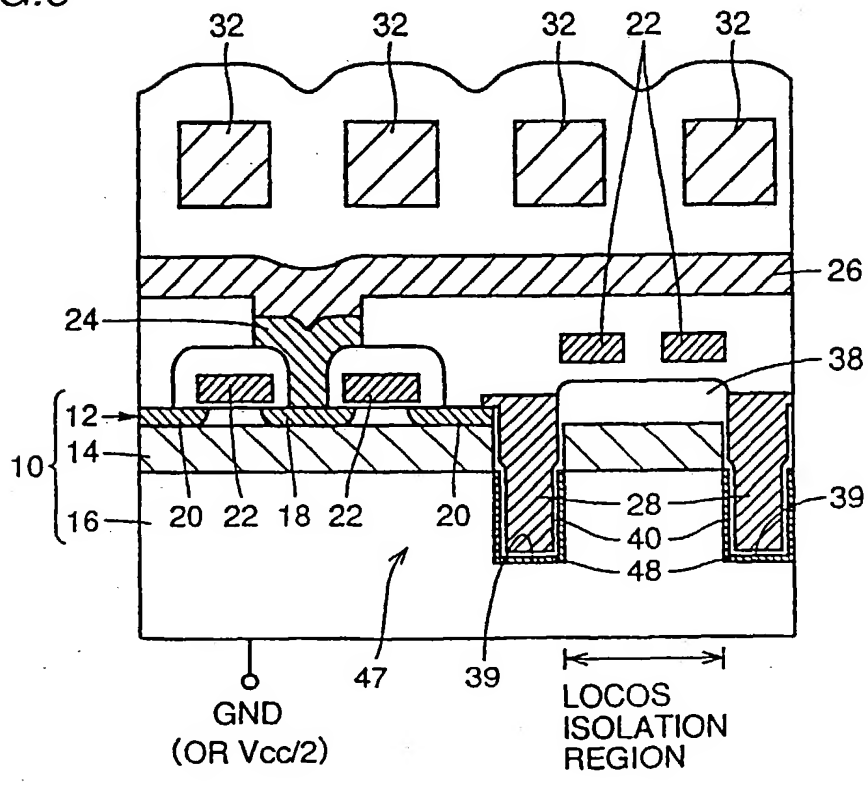
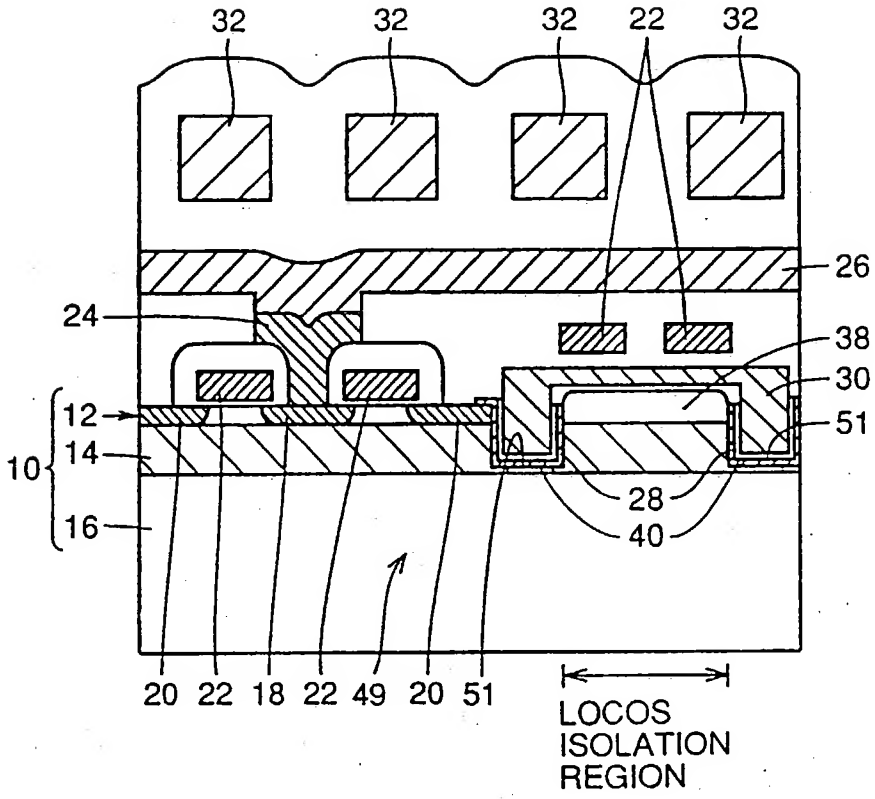

32
32
32
22
32
26
24
38
12
14
10
16
20
22
18
22
20
28
39
40
48
47
39
GND
(OR Vcc/2)
LOCOS
ISOLATION
REGION

FIG.9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32
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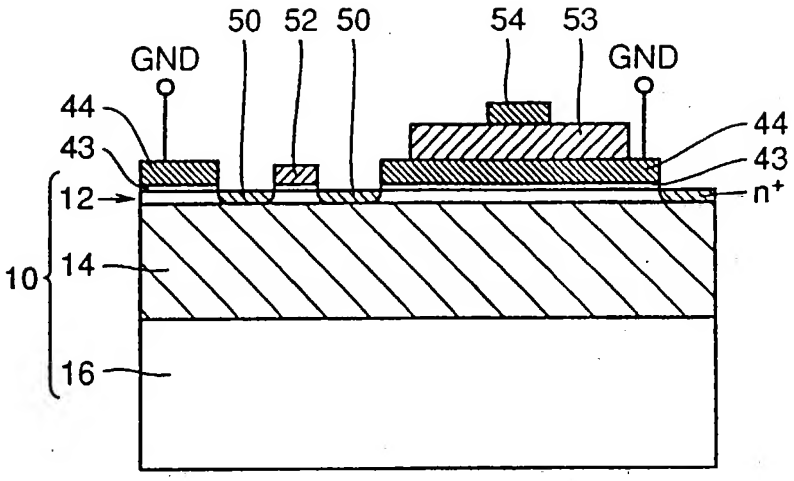
22
32
26
24
38
30
12
51
10
14
28
40
16
20
22
18
22
49
20
51
LOCOS
ISOLATION
REGION

FIG.10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52
50
54
53
GND
GND
44
43
12
10
14
16
44
43
n+

FIG.11

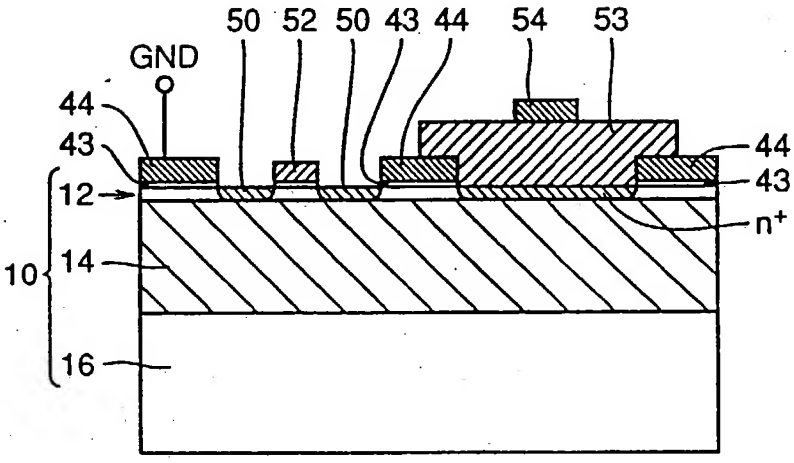

50
52
50
43
44
54
53
GND
44
43
12
10
14
16
44
43
n+

FIG.12

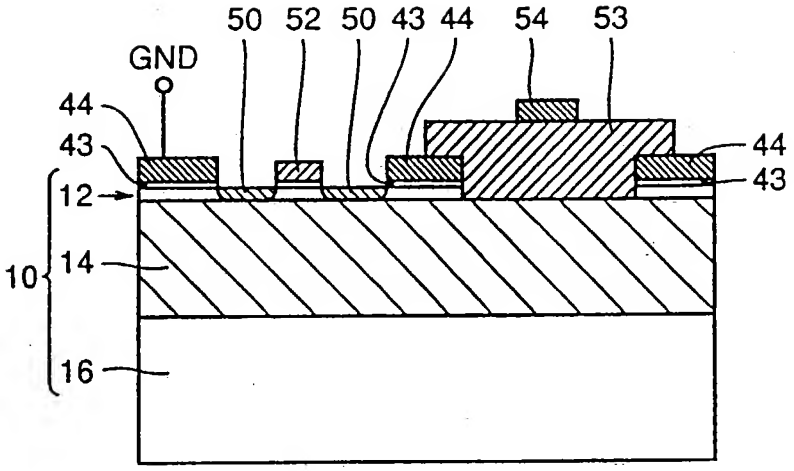
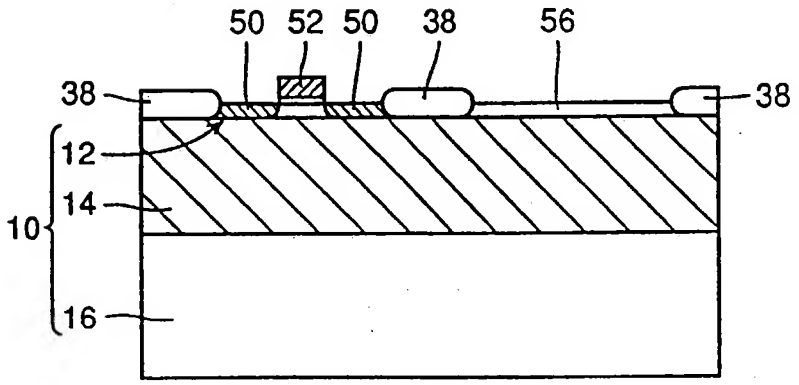

50
52
50
43
44
54
53
GND
44
43
12
10
14
16
44
43

FIG.13


50
52
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56
38
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14
16
38

FIG. 14

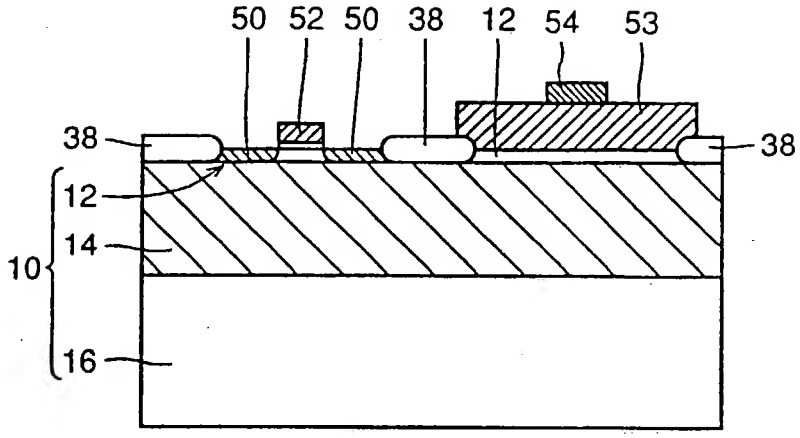

50
52
50
38
12
54
53
38
38
12
14
10
16

FIG. 15

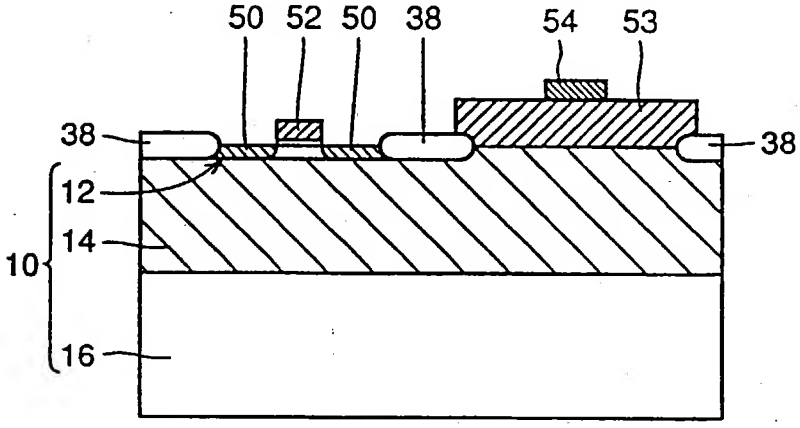

50
52
50
38
54
53
38
38
12
14
10
16

FIG.16

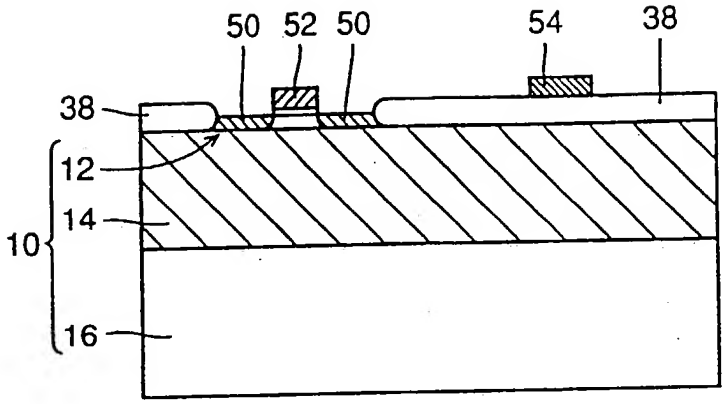


FIG.17

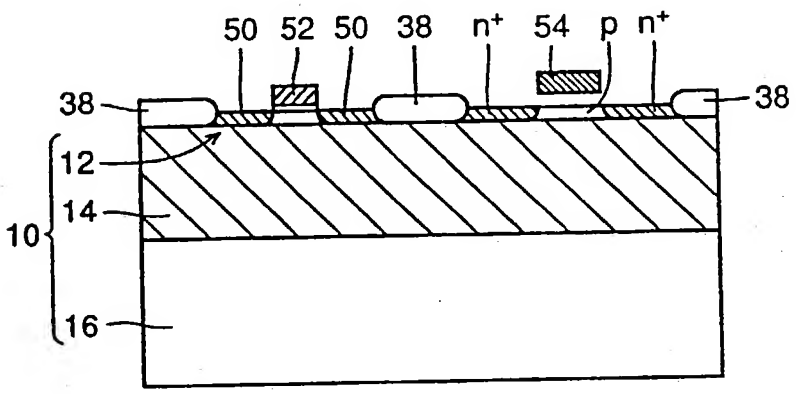


FIG.18

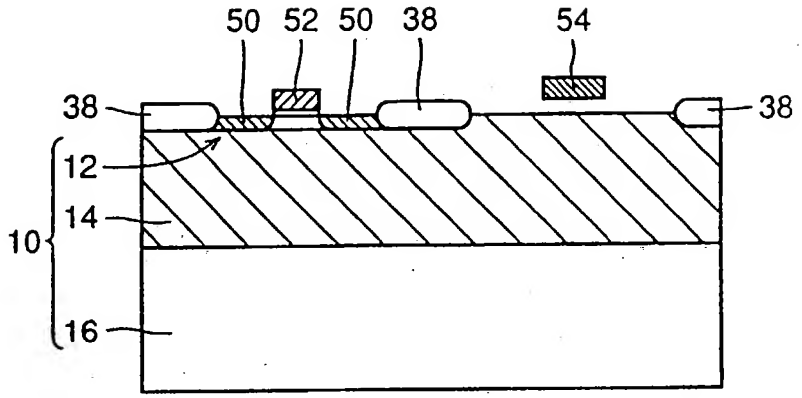


FIG.19

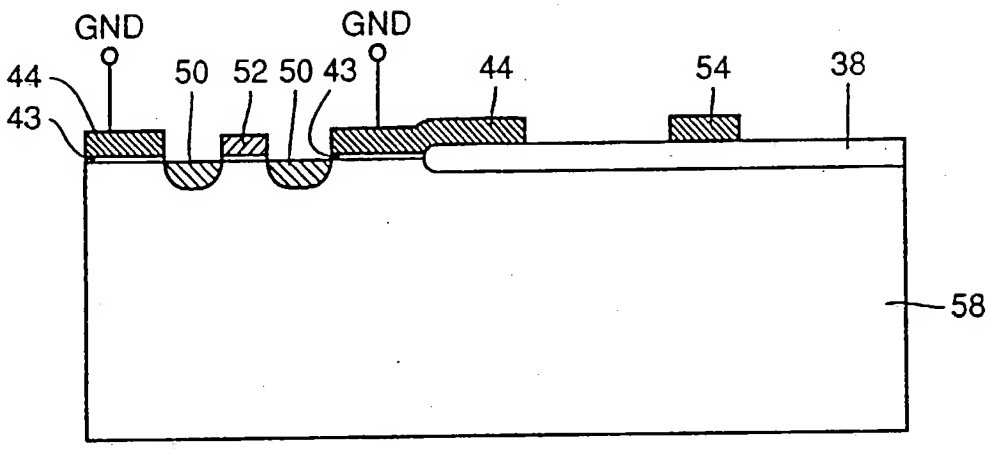

GND
GND
44
43
50
52
50
43
44
54
38
58

FIG.20

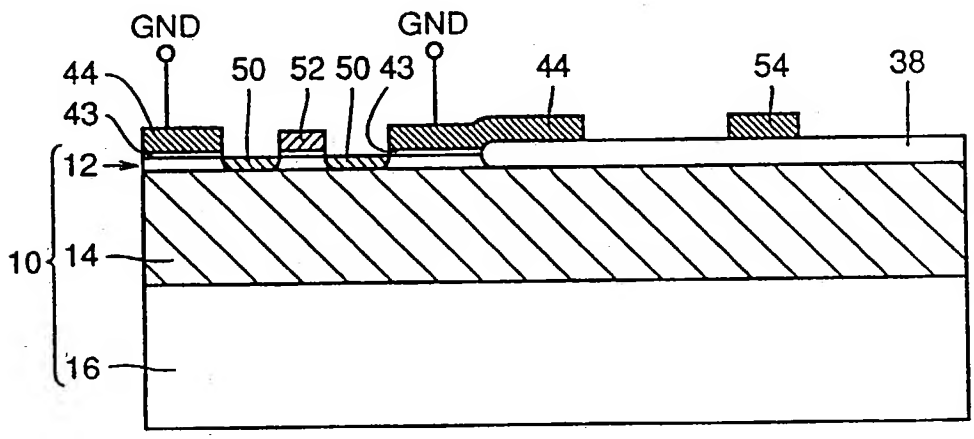

GND
GND
44
43
50
52
50
43
44
54
38
12
10
14
16

FIG.21

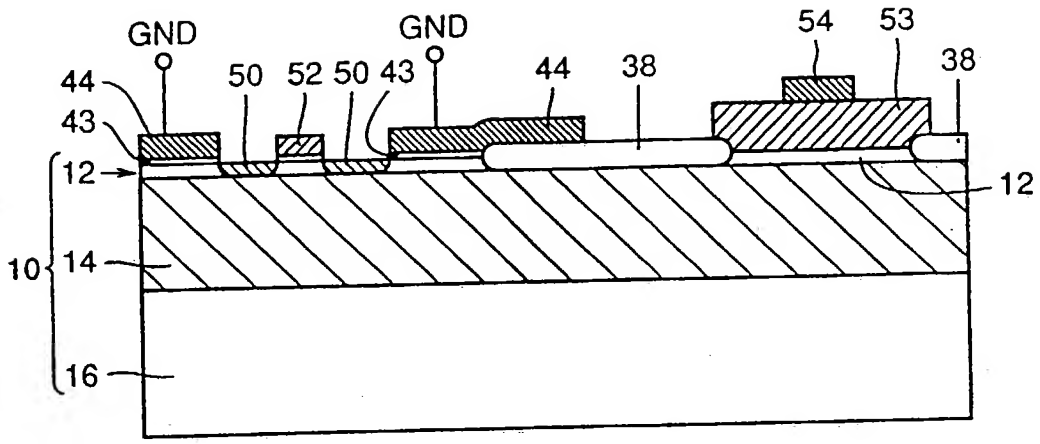

GND
GND
54
53
38
44
50
52
50
43
44
38
43
12
12
10
14
16

FIG.22

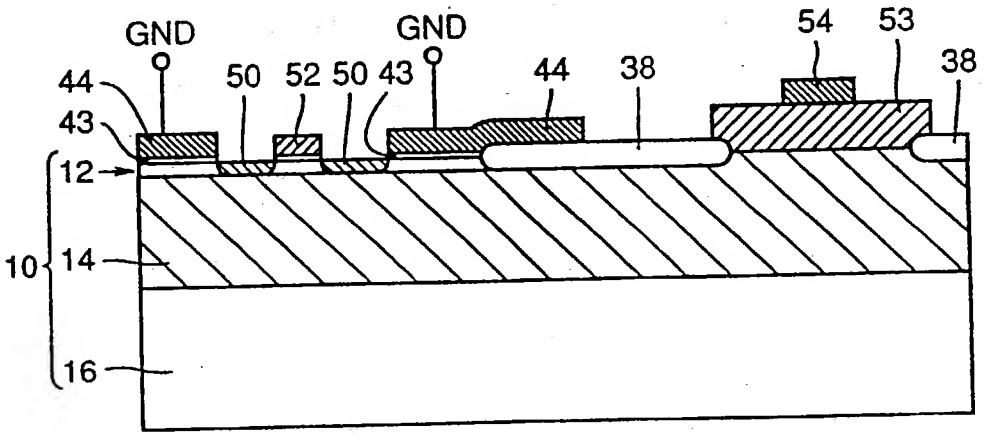

GND
GND
54
53
38
44
50
52
50
43
44
38
43
12
10
14
16

FIG.23

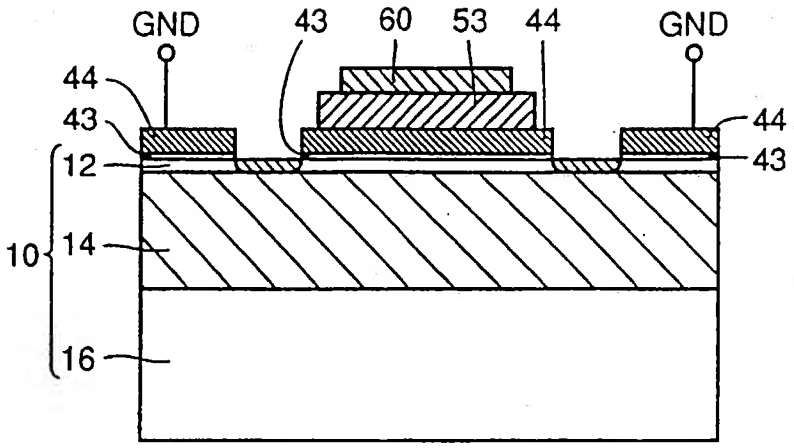

GND
43
60
53
44
GND
44
43
12
44
43
10
14
16

FIG.24

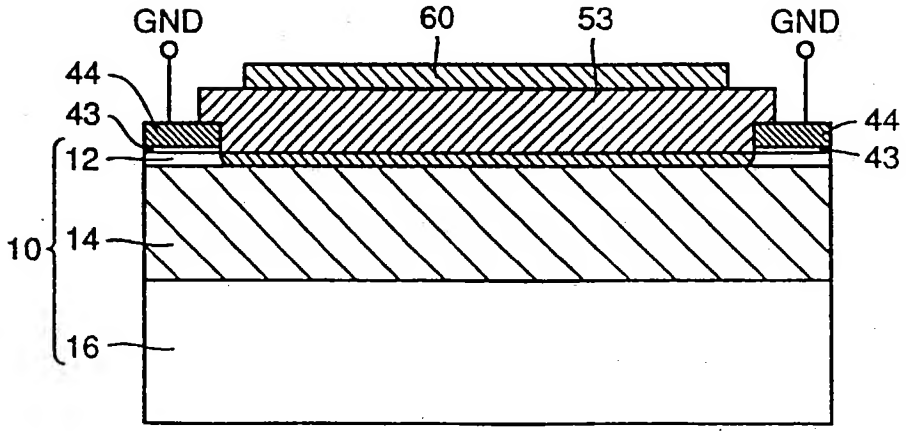

GND
60
53
GND
44
43
12
44
43
10
14
16

FIG.25

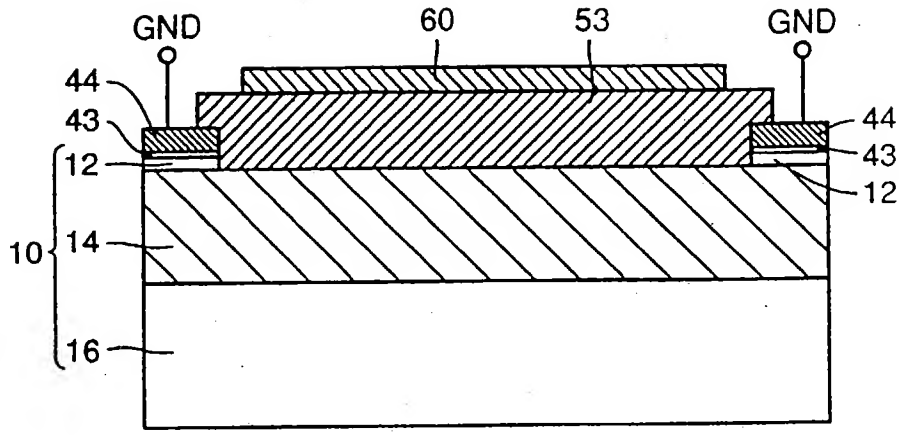


FIG.26

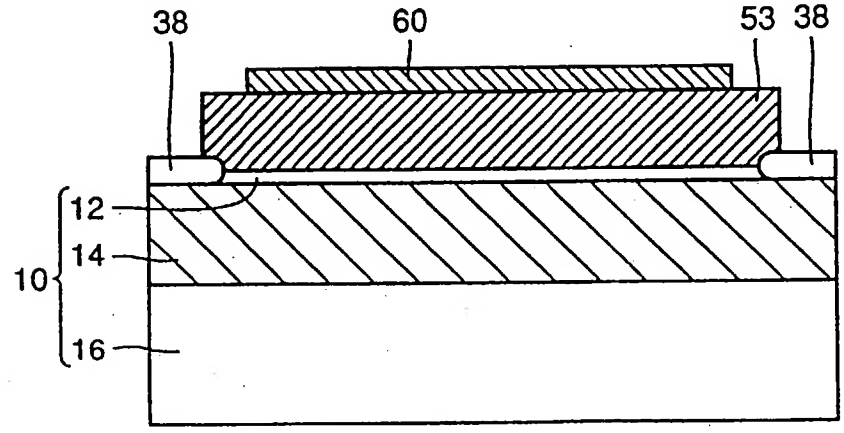


FIG.27

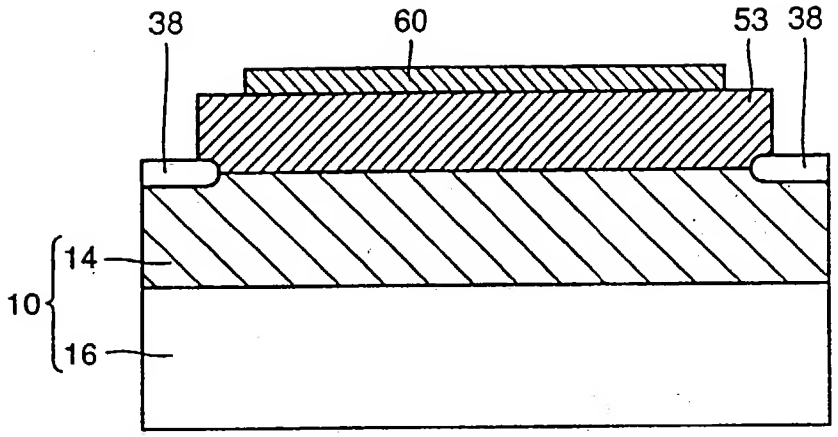


FIG.28

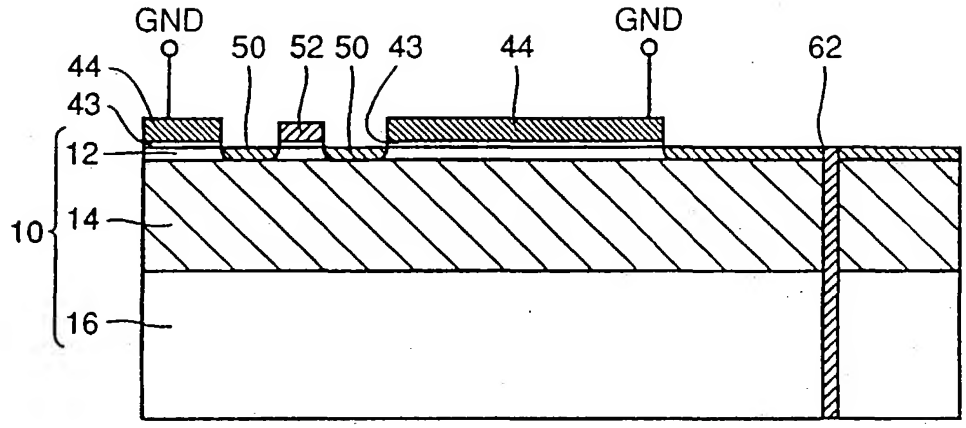

GND
50
52
50
43
44
GND
62
44
43
12
10
14
16

FIG.29

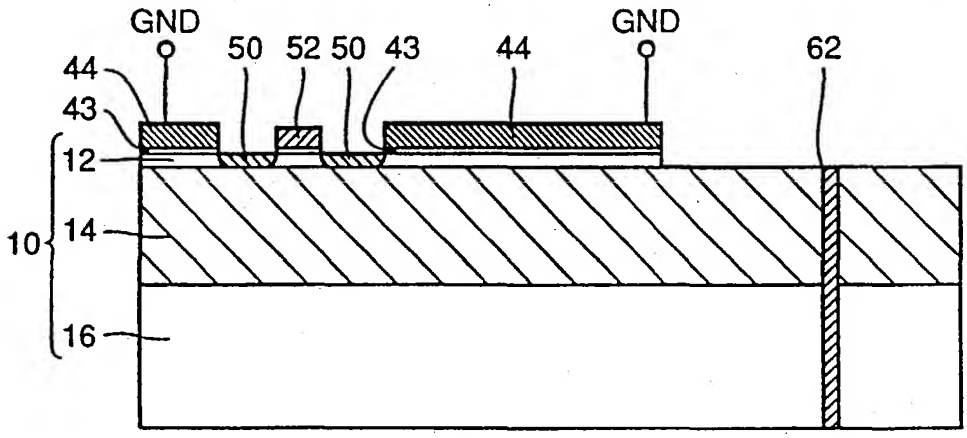

GND
50
52
50
43
44
GND
62
44
43
12
10
14
16

FIG.30

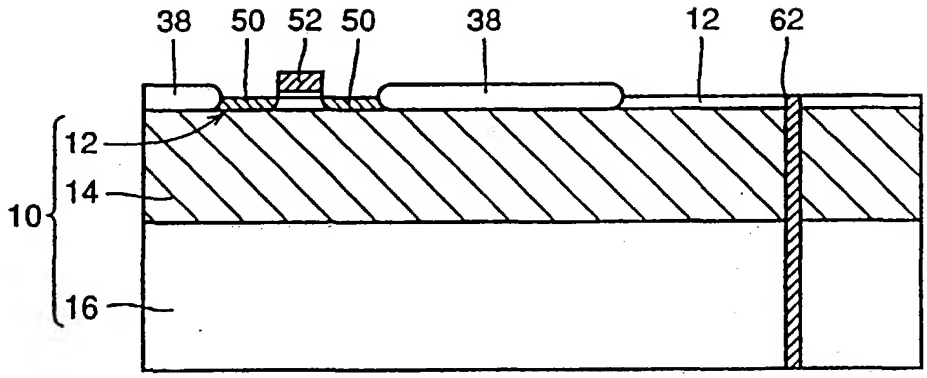


FIG.31

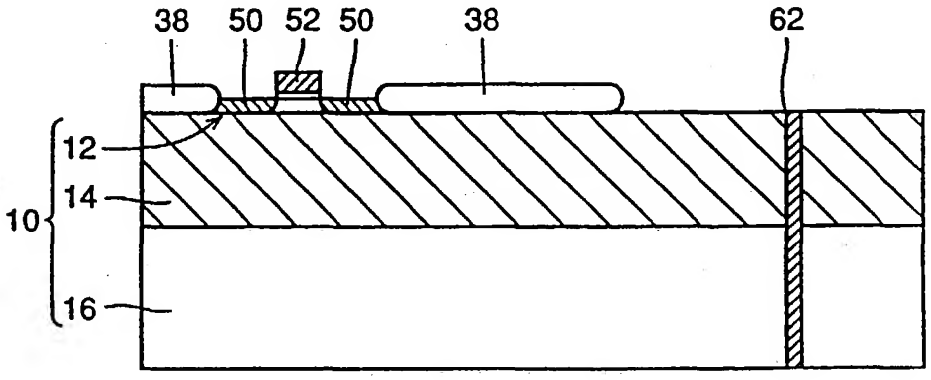


FIG.32

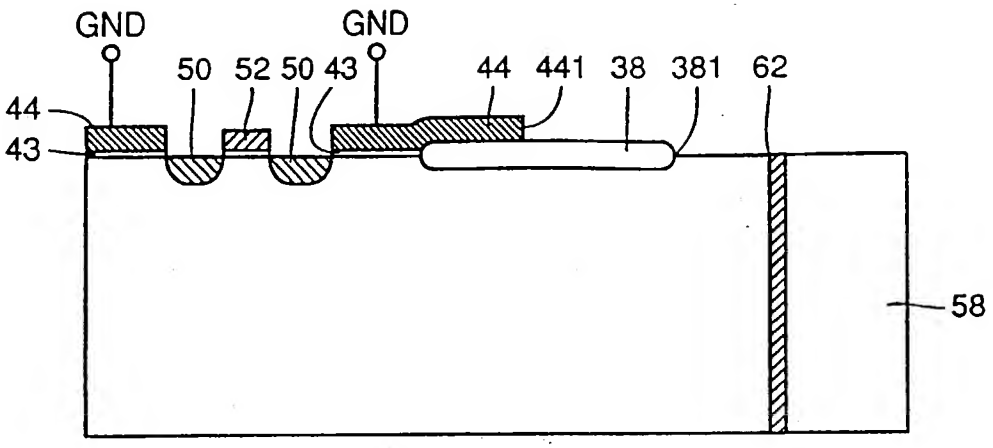
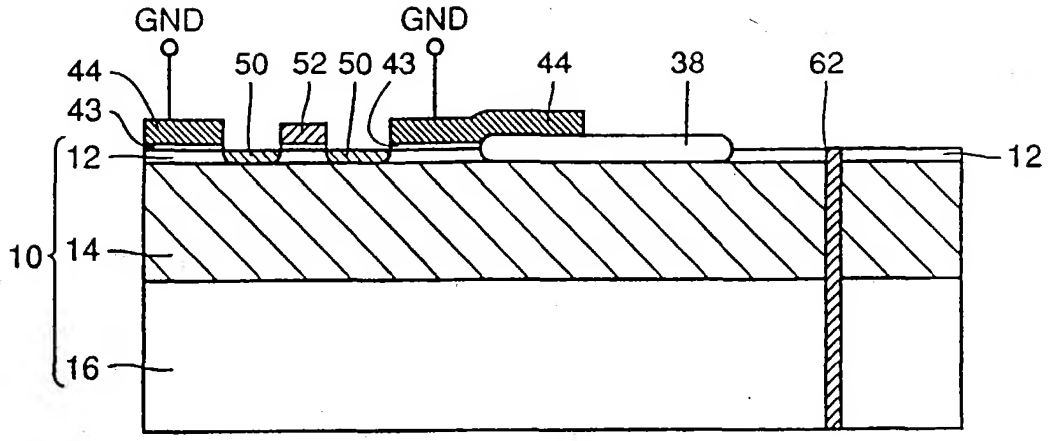


FIG.33


GND
GND
44
43
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52
50
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38
62
12
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14
16

FIG.34

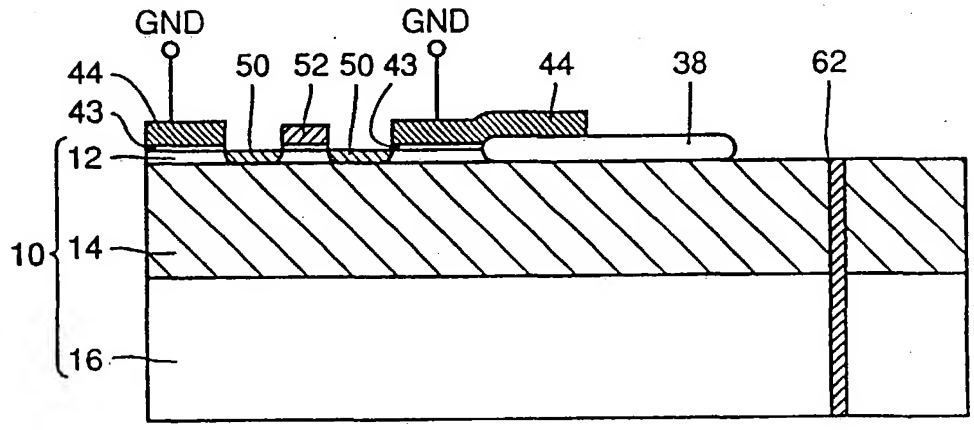
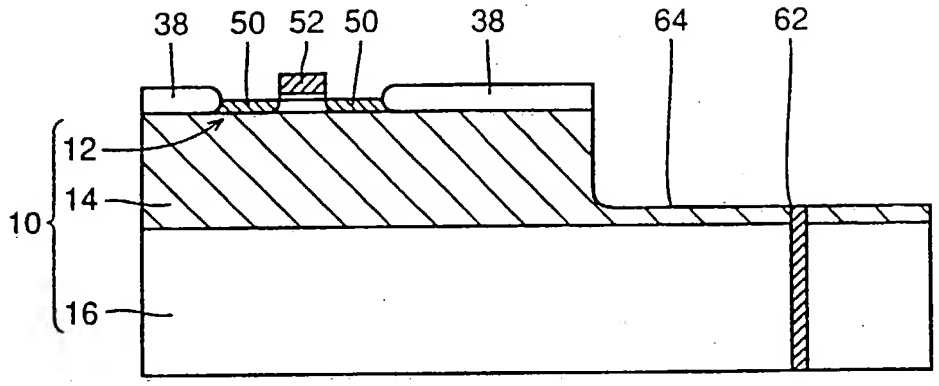

GND
GND
44
43
50
52
50
43
44
38
62
12
10
14
16

FIG.35


38
50
52
50
38
64
62
12
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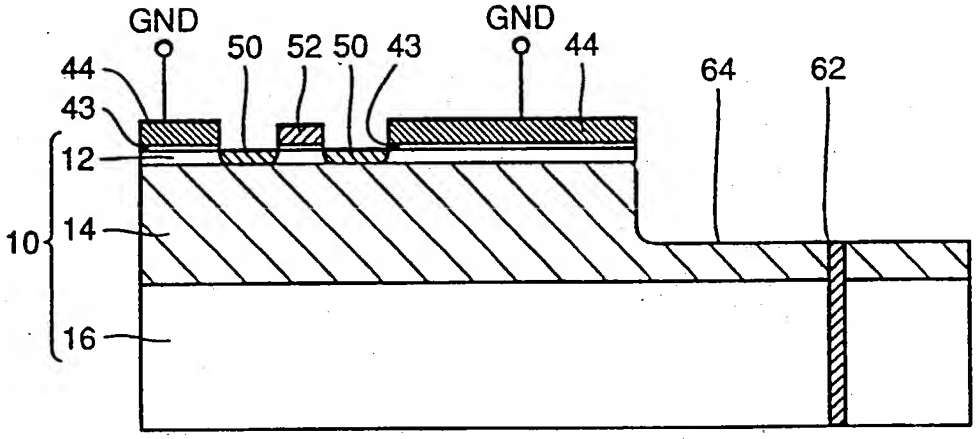
10
16

FIG.36


GND
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52
50
43
GND
44
44
64
62
43
12
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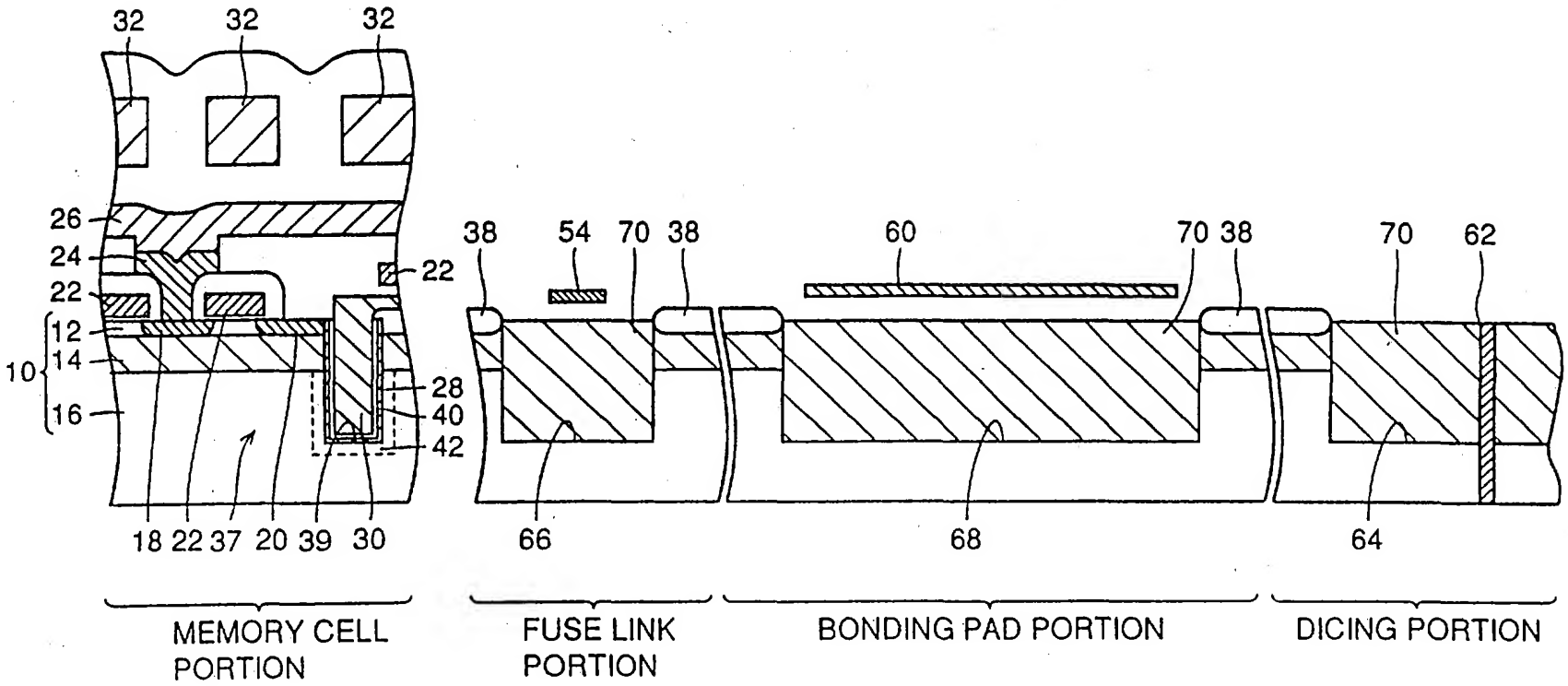
10
16

FIG.37


32
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38
66
60
70
38
68
70
62
64
MEMORY CELL PORTION
FUSE LINK PORTION
BONDING PAD PORTION
DICING PORTION

FIG.38(a)

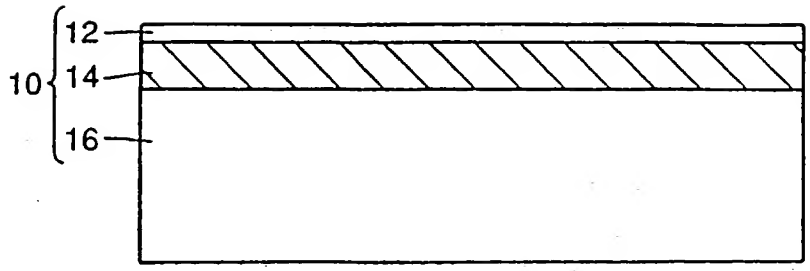


FIG.38(b)

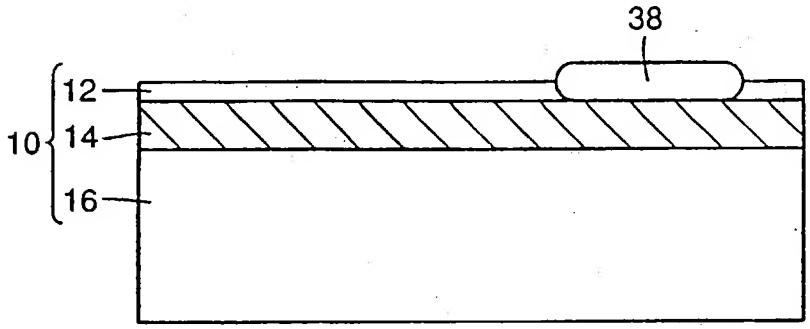


FIG.38(c)

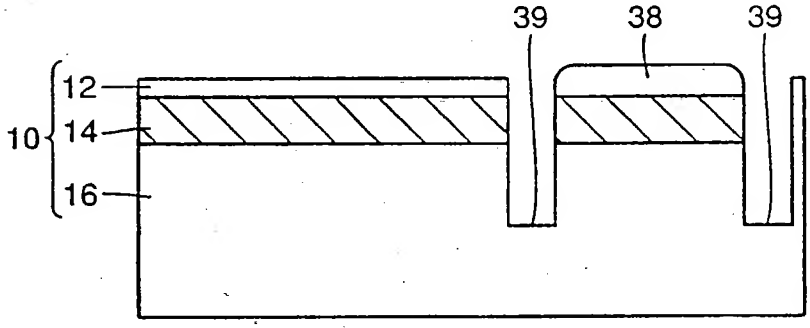


FIG.38(d)

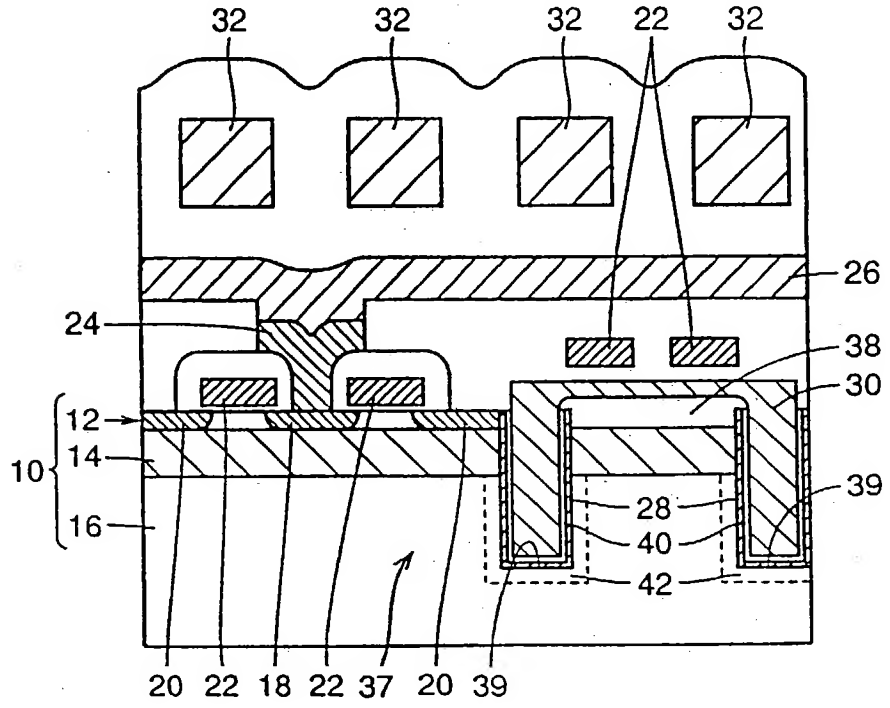


FIG.39(a)

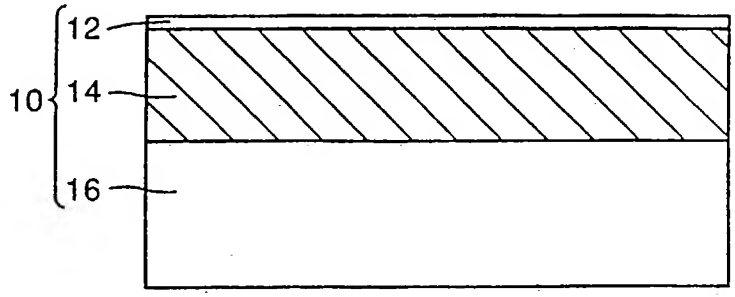


FIG.39(b)

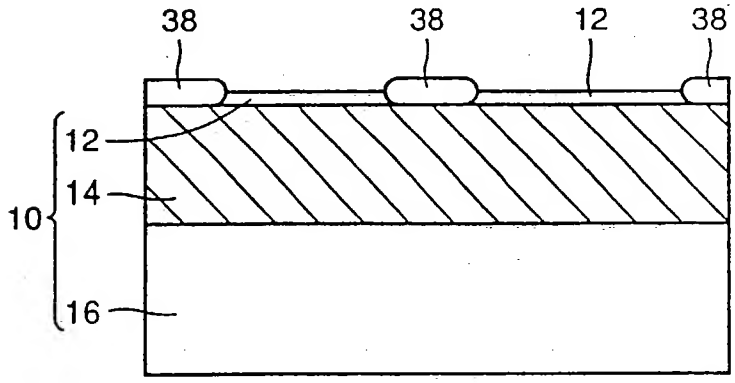


FIG.39(c)

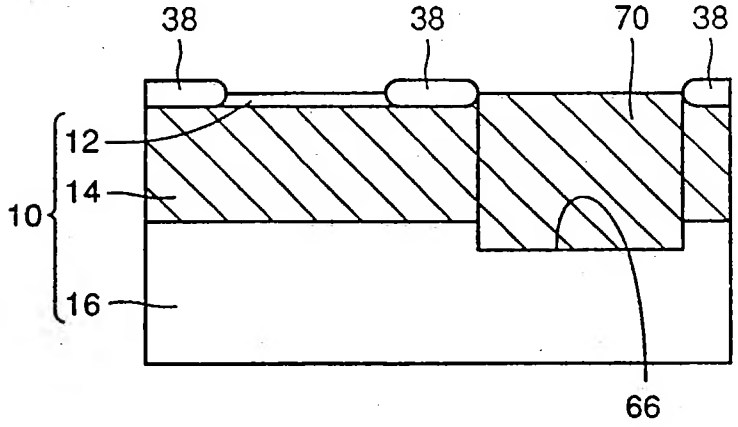


FIG.39(d)

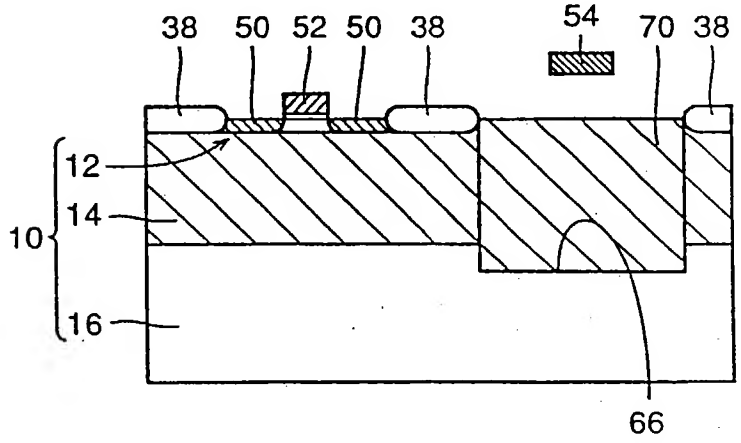


FIG.40(a)

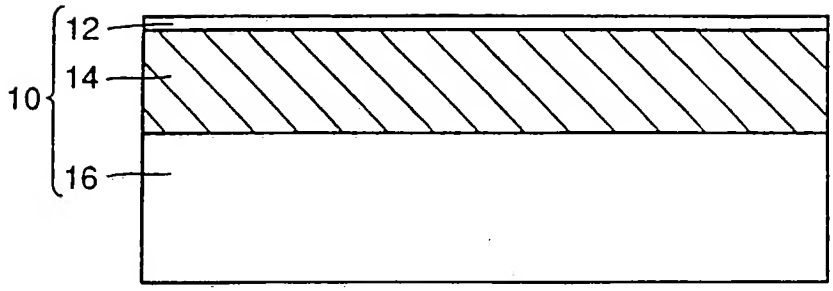


FIG.40(b)

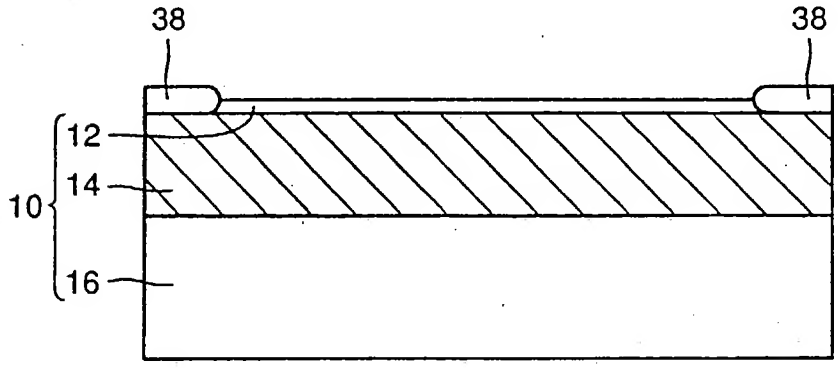


FIG.40(c)

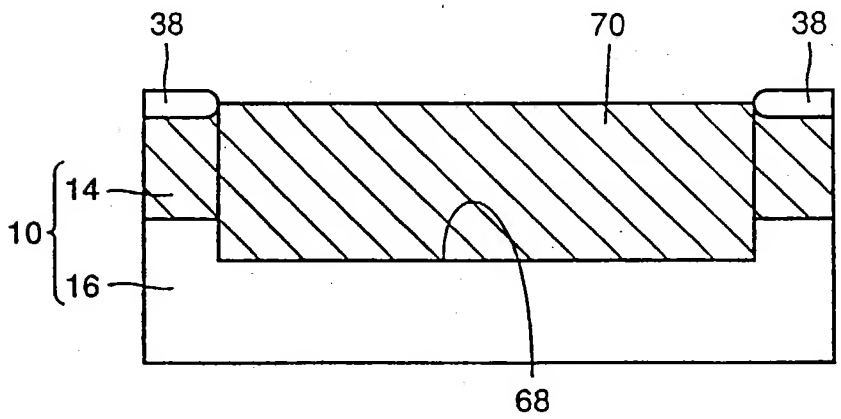


FIG.40(d)

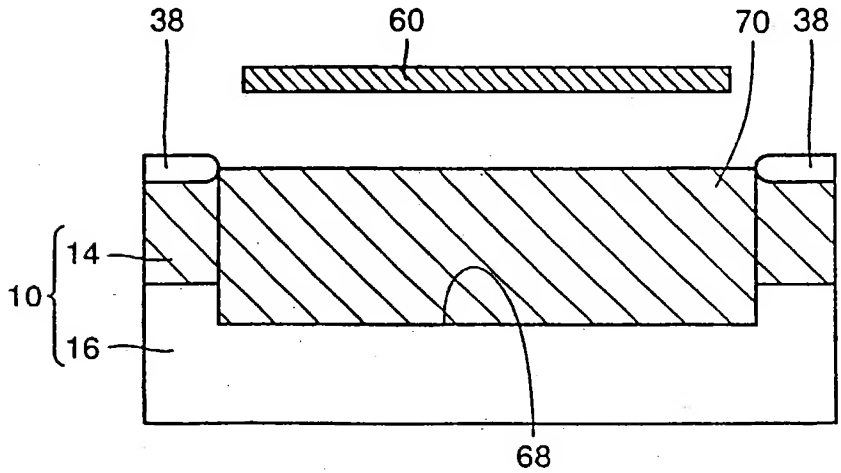


FIG.41(a)

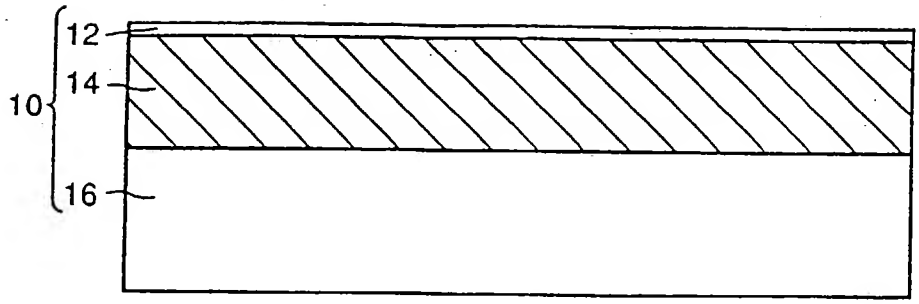


FIG.41(b)

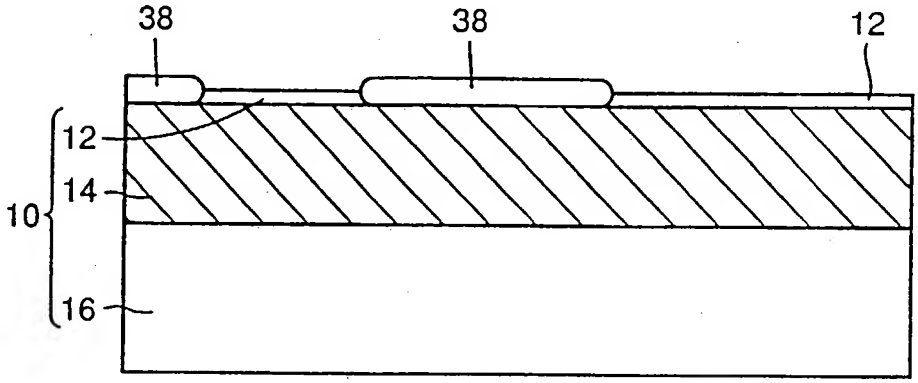


FIG.41(c)

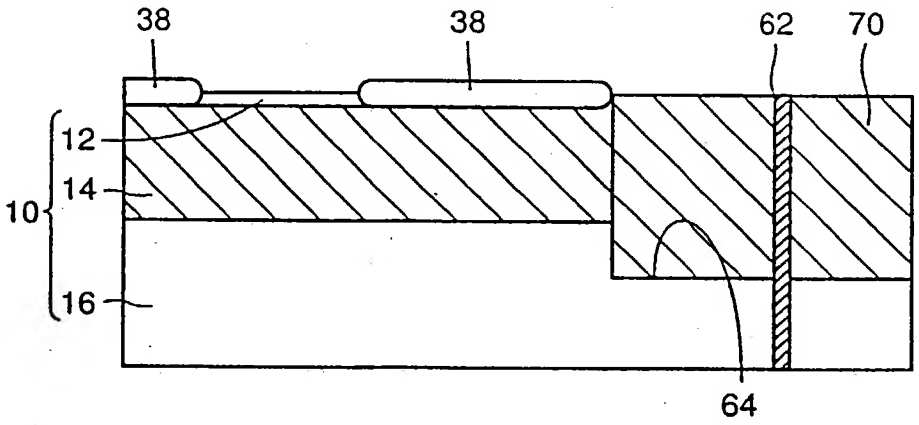


FIG.41(d)

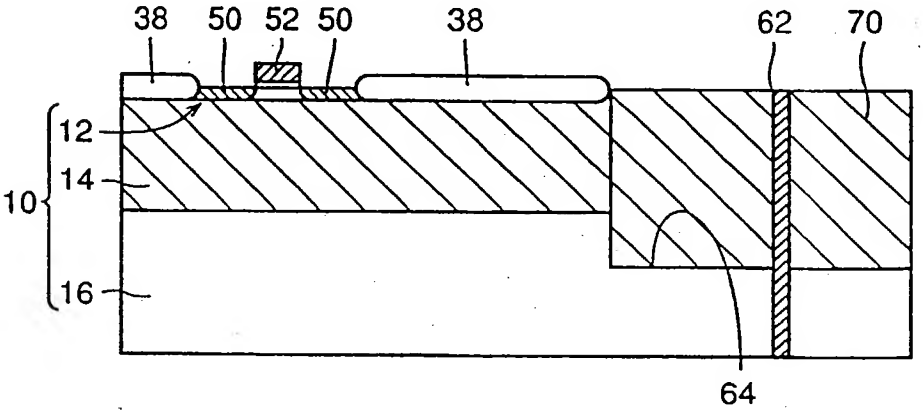
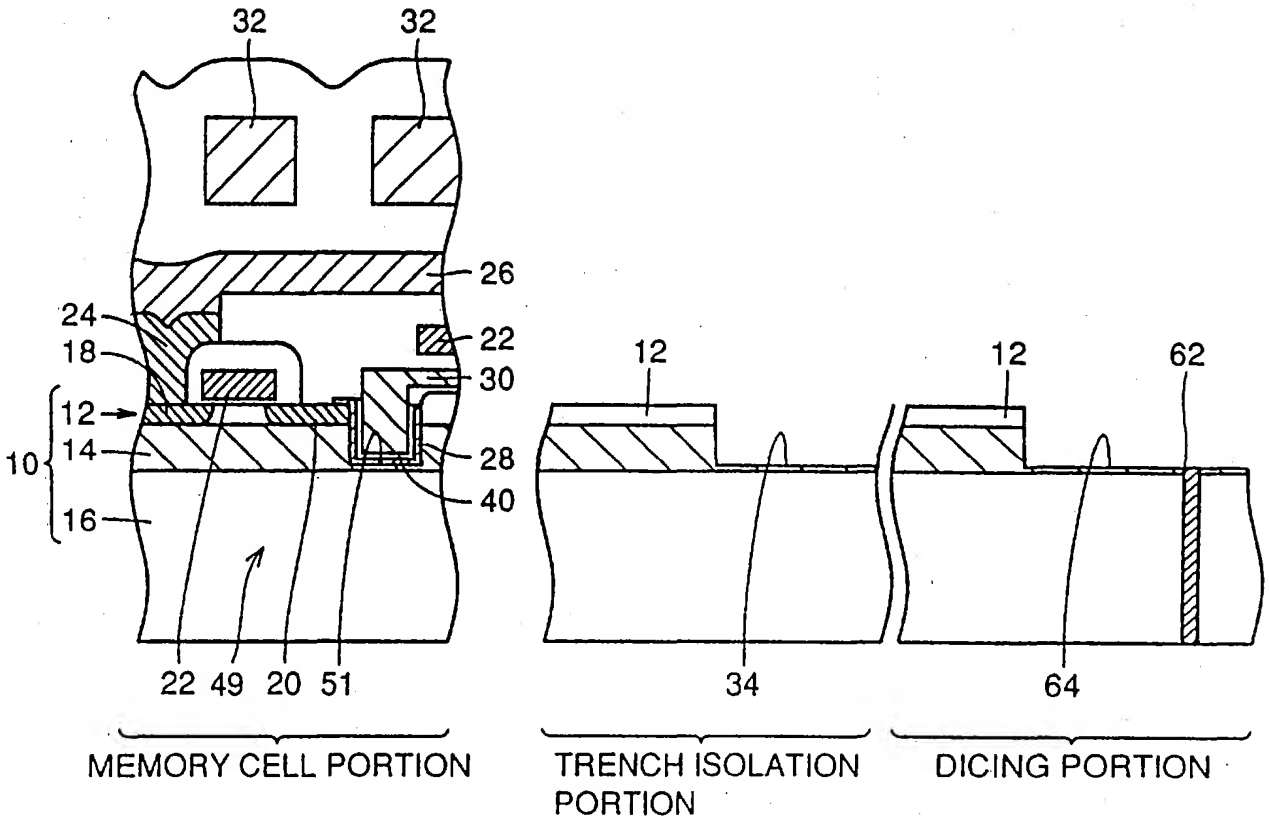


FIG.42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MEMORY CELL PORTION
TRENCH ISOLATION PORTION
DICING PORTION

FIG.43 PRIOR ART

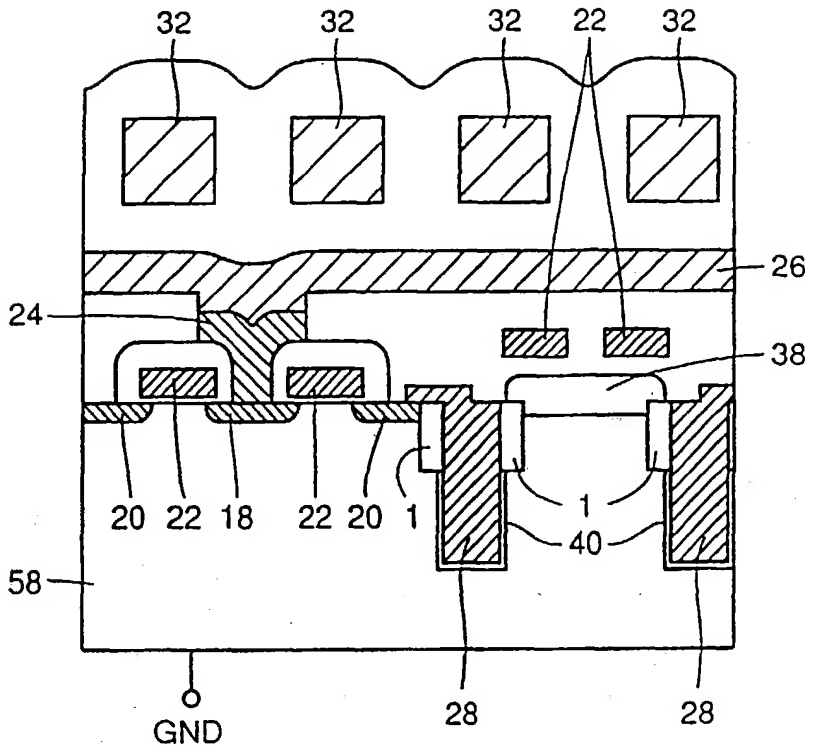

FIG.44 PRIOR ART